

WHAT IS CLAIMED IS:

1. A computerized system for analyzing student performance data and providing feedback based on the student performance data, the system comprising:

a computer network interface module configured to receive student performance data and transmit recommendation data via a computer network;

a data acquisition module configured to receive the student performance data from the computer network interface module and reformat the student performance data;

a performance analysis module configured to receive the reformatted student performance data from the data acquisition module and generate analysis data by analyzing the reformatted student performance data; and

a feedback generation module configured to receive the analysis data from the performance analysis module and generate the recommendation data based on the reformatted student performance data, wherein the computer network interface module receives the recommendation data from the feedback generation module and transmits the recommendation data onto the computer network.

2. The system of Claim 1, wherein the student performance data indicates a source of the data.

3. The system of Claim 2, wherein the data source is a school, a teacher or a student.

4. The system of Claim 2, wherein the student performance data comprises indexing the data with codes that have been pre-assigned to the school, teacher or student.

5. The system of Claim 1, wherein the student performance data comprises a score achieved by the student on a performance evaluation, and wherein the performance evaluation is a game, a lesson, a quiz or a test.

6. The system of Claim 5, wherein the student performance data comprises encrypted information indicating a student, teacher, or school that is the source of the test data.

7. The system of Claim 5, wherein the game comprises a spatial temporal math video game.

8. The system of Claim 7, wherein the student performance data comprises a sequence of consecutive scores achieved by the student on the math video game.

9. The system of Claim 1, wherein the analysis data comprises a learning curve.

10. The system of Claim 1, wherein the computer network is the Internet.

11. The system of Claim 1, wherein the analysis data is stored on a relational database, and wherein statistical and data mining analysis is performed on the analysis data to determine a specific learning problem of the student and to generate a remedial recommendation.

12. The system of Claim 1, wherein the analysis data is stored on a relational database, and wherein statistical and data mining analysis is performed on the analysis data to determine one or more universals of learning encoded in the analysis data.

13. A computerized system for analyzing student performance data and providing feedback based on the student performance data, the system comprising:

- a student computer system configured to administer a spatial temporal performance evaluation and record student response data;

- an education module configured to receive the student response data from the student system and generate student performance data indicative of the level of the student's mastery of the subject matter of the performance evaluation;

- an analysis and feedback module configured to receive the student performance data from the education module and generate analysis data by performing an analysis of the student performance data; and

- a school official computer system configured to receive the feedback data from the analysis and feedback module, wherein the feedback data comprises recommendations to a school official for enhancing student performance on subsequent performance evaluations.

14. The system of Claim 13, wherein the performance evaluation is a game, a lesson, a quiz, or a test.

15. The system of Claim 14, wherein the game is a spatial temporal math video game.

16. The system of Claim 13, wherein the student performance data indicates a source of the data.

17. The system of Claim 13, wherein the student performance data comprises a score achieved by the student on a performance evaluation, and wherein the performance evaluation is a game, a lesson, a quiz or a test.

18. The system of Claim 13, wherein the student performance data comprises encrypted information indicating a student, teacher, or school that is the source of the test data

19. A method of analyzing successive performances by a student for a computerized quiz and providing feedback based on the performances, the method comprising:

determining whether a student has achieved a passing score on a quiz;

comparing the passing score to at least one score obtained from at least one subsequent quiz;

determining whether the student is authorized to progress to a next task of a curriculum or whether the student needs assistance from an instructor based on the comparison;

analyzing the passing score and the at least one subsequent quiz score to generate a learning curve and determine whether a deviation in a learning rate exists;

calculating a best fit curve to the learning curve;

extrapolating the best fit curve to determine whether the passing score will be reached within a maximum allotted number of times of taking the quiz; and

generating feedback data based on the determination of whether the passing score will be reached within the maximum allotted number of times of taking the quiz.

20. The method of Claim 19, wherein the feedback data comprises recommending that the student continue taking the quiz, recommending that the instructor provide assistance to the student, or recommending that the student continue taking the quiz with further observation and reevaluation by the instructor.

21. The method of Claim 19, wherein the determining whether a deviation in a learning rate exists comprises graphing the quiz scores against the number of times the quiz is taken for the most recent day.

22. The method of Claim 21, wherein the determining whether a deviation in a learning rate exists further comprises comparing the quiz scores against the number of times the quiz is taken for all days the quiz is taken.

23. A method of developing a computerized game for teaching mathematical concepts to a student, the method comprising:

determining a mathematical concept to be taught to a student;

formulating a basic spatial temporal test of the mathematical concept;

administering the basic spatial temporal test to the student;

testing an initially designed game of the mathematical concept to obtain a progress curve of game scores;

analyzing the progress curve to determine whether it indicates successful learning and retention of the mathematical concept;

comparing a score on the initially designed game with a score on the basic spatial temporal test to determine whether the game score is commensurate with the test score;

administering a diagnostic quiz of the mathematical concept to the student;

comparing the game score to a score on the diagnostic quiz to determine whether the game score is commensurate with the diagnostic quiz score;

determining adjustments to the game or the diagnostic quiz based on the comparison of the game score to the diagnostic quiz score;

redesigning the game based on the adjustments to the game or the diagnostic quiz; and

integrating the redesigned game into an educational curriculum.

24. A computer readable storage medium having stored thereon instructions that when executed by a computer processor perform a method of analyzing successive performances by a student for a computerized game and providing feedback based on the performances, the method comprising:

determining whether a student has achieved a passing score on a quiz;
comparing the passing score to at least one score obtained from at least one subsequent quiz;

determining whether the student is authorized to progress to a next task of a curriculum or whether the student needs assistance from an instructor based on the comparison;

analyzing the passing score and the at least one subsequent quiz score to generate a learning curve and determine whether a deviation in a learning rate exists;

calculating a best fit curve to the learning curve;

extrapolating the best fit curve to determine whether the passing score will be reached within a maximum allotted number of times of taking the quiz; and

generating feedback based on the determination of whether the passing score will be reached within the maximum allotted number of times of taking the quiz.

25. The method of Claim 24, wherein the feedback data comprises recommending that the student continue taking the quiz, recommending that the instructor provide assistance to the student, or recommending that the student continue taking the quiz with further observation and reevaluation by the instructor.

26. The method of Claim 24, wherein the determining whether a deviation in a learning rate exists comprises graphing the quiz scores against the number of times the quiz is taken for the most recent day.

27. The method of Claim 26, wherein the determining whether a deviation in a learning rate exists further comprises graphing the quiz scores against the number of times the quiz is taken for all days the quiz is taken.